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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/057,816	01/24/2002	Ronald L. Mahany	36500ZXD	4621
<div>7590 03/20/2007 Christopher C Winslade McAndrews Held &amp; Malloy 500 W Madison Street Suite 3400 Chicago, IL 60661</div>			<div>EXAMINER VO, NGUYEN THANH</div> <div>ART UNIT 2618 PAPER NUMBER</div>	
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		03/20/2007	PAPER	

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

## Office Action Summary

Application No.

10/057,816

Applicant(s)

MAHANY, RONALD L.

Examiner

Nguyen T. Vo

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 24 April 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 26-34 and 72-150 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 26-31 is/are allowed.
- 6) ☒ Claim(s) 32-34 and 72-150 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 January 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☒ Certified copies of the priority documents have been received in Application No. 07/973,237.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Oath/Declaration***

1. The new oath or declaration filed on July 05<sup>th</sup>, 2005 is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

The oath or declaration is defective because fails to state the citizenship, residence, and mailing address of the legal representative.

According to M.P.E.P. section 605.04(a):

"If the person signing the oath or declaration is the legal representative of a deceased inventor, the oath or declaration shall also state that the person is a legal representative and the citizenship, residence, and mailing address of the legal representative".

### ***Specification***

2. The disclosure is objected to because of the following informalities: the Appendices D3, D4, E, H are not mentioned in the present specification (only Appendices A, B, C, D1, D2, D5, F and G are mentioned in the present specification).

Appropriate correction is required.

3. The newly-added first two pages of the present specification are objected to under 35 U.S.C. 132 because it introduces new matter into the disclosure. 35 U.S.C. 132 states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as

**follows: the “incorporated by reference” in the last two paragraphs on page 2 is not supported in the original specification.**

Applicant is required to cancel the new matter in the reply to this Office Action.

4. It is determined that the claimed invention of claims 26-34, 72-150 are not supported by the disclosure of the parent application 07/973,237 filed on 11/09/1992. Accordingly, the claimed invention of claims 26-34, 72-150 and newly-added claims 58-71 are not supported by the disclosures of the European Patent Application EP89114386.9 filed on 08/03/1989, and international application PCT/US90/03282 filed on 06/07/1990.

Since the present application has several parent applications, it is important to determine the effective filing date of the claimed invention of each claim. As best understood by examiner, the claimed invention of claims 26-31 has the effective filing date of 07/06/1992 which is the filing date of the parent application 07/910,865, wherein *a mobile station for which a communication link has not been established evaluates transmission from a base station to one or more transceiver units for which communication links have been established, and selects transmission rate.*

The claimed invention of claims 32-34, 72-87, 112-137 has the effective filing date of 08/04/1989 which is the filing date of the parent application 07/389,727, wherein *a mobile station selects transmission rates based on channel quality.*

The claim invention of claims 88-111, 138-150 has the effective filing date of 08/04/1988 which is the filing date of the US Patent 4,910,794, which discloses *selecting transmission rates based on channel quality.*

***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claims 88-98 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Regarding newly-added claims 88-98, the original specification fails to support for the newly-added limitation "**A machine-readable storage**" having stored thereon a computer program having "**a plurality of code sections**" for implementing a method of determining a data rate as specified in claim 88.

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 32-33, 150 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As to claim 32, the recitation "the invention" at line 5 lacks clear antecedent basis.

As to claim 150, the recitations "the receiver" and "the transmitter" lack clear antecedent basis.

***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 32-34, 72-83, 85-95, 97-109, 111-120, 122-133, 135-148, 150 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zook (4,850,009) in view of Kageyama (4,110,558, cited by examiner).

As to claim 32, Zook discloses data communication system is a radio frequency data communication system wherein a multiplicity of mobile transceiver units 20 (see figure 1; column 7 lines 42-44) are to collect data and are to transmit the collected data promptly after its collection to a base transceiver station 76 (see figure 5). See also column 1 lines 13-21; column 7 lines 9-30. Zook fails to disclose selecting data rate as claimed. Kageyama discloses in a data communication system wherein reliable communication between transceiver unit and transceiver station could occur at a limited data rate, the system comprising a transceiver station capable of transmitting data at a limited data rate and at an increased data rate, said transceiver station effecting a communication with at least one of the transceiver units at the increased data rate; the transceiver units evaluating the communication from the transceiver station to said at least one transceiver unit to predict whether successful communication with the transceiver station will occur at the increased data rate; said transceiver units which predict successful communication with the transceiver station at the increased data rate

responding to signals from the transceiver station at the increased data rate; and said transceiver units which fail to predict successful communication with the transceiver station at the increased rate responding signals from the transmission station at the limited data rate. See column 7 line 52 to column 8 line 10. In this case, "predicting whether successful communication with the transceiver station will occur" as claimed reads on estimate the BER to determine channel quality in Kageyama. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to provide the above teaching of Kageyama to Zook, in order to reduce transmission time by enabling a data rate to be selectively changed according to the current quality of transmission channels (as suggested by Kageyama at column 1 lines 37-48).

As to claim 33, the combination of Zook and Kageyama disclose the claimed limitations (see Zook, column 7 lines 33-55; Kageyama at column 7 line 52 to column 8 line 10).

As to claim 34, it is rejected for similar reasons as set forth in claim 32 above.

As to claim 72, the combination of Zook and Kageyama disclose the claimed limitations (see Kageyama at column 7 line 52 to column 8 line 10).

As to claim 73, the combination of Zook and Kageyama does disclose mobile transceiver units (see Zook, figure 1), but fails to disclose that the mobile transceiver units comprising mobile unit on a vehicle as claimed. Those skilled in the art, however, would have recognized that the bar code reader in Zook could also be placed in a vehicle without changing the spirit and scope of Zook's invention. In addition, the examiner takes Official Notice that placing a mobile transceiver unit on a vehicle is

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known in the art of radio communications system. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the combination of Zook and Kageyama, such that the mobile transceiver units are placed on vehicles, in order to improve mobility of the mobile transceiver units.

As to claim 74, the combination of Zook and Kageyama disclose the claimed limitations (see Kageyama at column 7 line 52 to column 8 line 10).

As to claim 75, it is rejected for similar reasons as set forth in claim 32 above.

As to claims 76-77, 89-90, 100-102, 113-114, 126-127, 139-141, the combination of Zook and Kageyama discloses evaluating operating conditions of the wireless network by measuring the error rate (see Kageyama, column 7 line 52 to column 8 line 10), but fails to disclose evaluating operating conditions of the wireless network by measuring signal strength as claimed. The examiner, however, takes Official Notice that using measured signal strength to evaluate operating conditions of a wireless network is known in the art. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the combination of Zook and Kageyama as claimed, in order to have a simpler way of evaluating the operating conditions of the wireless network.

As to claims 78-79, 86-87, 91-92, 103-104, 115-116, 123-124, 128-129, 136-137, 142-143, the combination of Zook and Kageyama disclose the claimed limitations (see Kageyama at column 7 line 52 to column 8 line 10).

As to claims 80, 93, 108, 117, 130, 147, the combination of Zook and Kageyama fails to disclose a polling message. The examiner, however, takes Official Notice that



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such a polling message is known in the art of wireless communication system.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the combination of Zook and Kageyama as claimed, in order to improve signaling between mobile transceiver units and base station.

As to claims 81, 94, 107, 118, 131, 146, the combination of Zook and Kageyama disclose the claimed limitations (see Kageyama at column 7 line 52 to column 8 line 10).

As to claims 82, 95, 109, 119, 132, 148, the combination of Zook and Kageyama disclose the claimed limitations (see Kageyama at column 7 lines 52-62).

As to claims 83, 106, 120, 133, 145, the combination of Zook and Kageyama disclose the claimed limitations (see Kageyama at column 7 lines 11-22 which discloses that the test message is transmitted after transmission of a synchronization code. See also figure 2 which shows the synchronization code is transmitted periodically).

As to claims 85, 97, the combination of Zook and Kageyama disclose the claimed limitations (see Kageyama at column 7 lines 52-62).

As to claims 88, 98, they are rejected for similar reasons as set forth in claim 32 above.

As to claims 99, 105, they are rejected for similar reasons as set forth in claim 32 above.

As to claims 111, 150, the combination of Zook and Kageyama fails to disclose that the receiver and transmitter operate on the same radio frequency. The examiner, however, takes Official Notice that receiver and transmitter operating on the same radio frequency is known in the art (such as time division duplex TDD system). Therefore, it

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would have been obvious to one of ordinary skill in the art at the time of the invention to modify the combination of Zook and Kageyama as claimed, in order to reduce the number of channels needed in the network.

As to claims 112, 122, they are rejected for similar reasons as set forth in claim 32 above.

As to claims 125, 135, they are rejected for similar reasons as set forth in claim 32 above.

As to claims 138, 144, they are rejected for similar reasons as set forth in claim 32 above.

11. Claims 84, 96, 110, 121, 134, 149 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zook in view of Kageyama and Kudo (4,606,044, cited by examiner).

As to claims 84, 96, 110, 121, 134, 149, the combination of Zook and Kageyama fails to disclose that the message is transmitted at a lower data rate as claimed. Kudo discloses transmitting test message at a lower data rate (see column 3 lines 39-44). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the combination of Zook and Kageyama with Kudo, in order to reduce the message error in receiving the test message.

***Allowable Subject Matter***

12. Claims 26-31 are allowed.

As to claim 26-31, the prior art of record fail to disclose or render obvious the operations of the mobile transceiver units for which a communication link the base transceiver has not been established, as specified in independent claim 26.

***Response to Arguments***

13. Applicant's arguments filed July 05<sup>th</sup>, 2005 have been fully considered but they are not persuasive.

Regarding the objection to the Oath/Declaration:

Applicant argues that a new oath or declaration filed on July 05<sup>th</sup>, 2005 overcomes the objection to the oath/declaration as set forth in the previous Office Action. The examiner, however, disagrees. The new oath or declaration is defective because fails to state the citizenship, residence, and mailing address of the legal representative.

According to M.P.E.P. section 605.04(a):

"If the person signing the oath or declaration is the legal representative of a deceased inventor, the oath or declaration shall also state that the person is a legal representative and the citizenship, residence, and mailing address of the legal representative".

Regarding the objection to the specification:

The examiner agrees with applicant that appendices D5 and G are supported by the original specification. However, since the appendices D3, D4, E, H are not mentioned in the present specification (only Appendices A, B, C, D1, D2, D5, F and G are mentioned in the present specification), the objection to the specification is still maintained.

Applicant further argues that appendices D3, D4, E and H are mentioned in one or more of the applications cited in the priority chain (e.g., application No. 08/551,442).

The examiner, however, disagrees. The specification of the parent application was also objected for the same reason because appendices D3, D4, E and H were not originally filed in the parent application 08/551,442.

Applicant further argues that "A careful review of the specification reveals that a majority of the information incorporated by reference includes applications from which the subject application claims priority or are incorporated into the subject application in subsequent pages thereof. As such, the subject paragraphs do not appear to include new matter". See page 10 of applicant's response filed on July 05<sup>th</sup>, 2005. The examiner, however, disagrees. **The "incorporated by reference" in the last two paragraphs on page 2 is not supported in the original specification.**

Regarding the priority of the claimed invention:

Applicant argues that all claims are supported by the disclosure of the application No. 07/228,355 filed on August 4<sup>th</sup>, 1988. The examiner, however, disagrees. **The disclosure of the application No. 07/228,355 fails to support the claimed inventions of claims 26-34, 72-87, 112-137.**

The examiner contends that the claimed invention of claims 26-31 has the effective filing date of 07/06/1992 which is the filing date of the parent application 07/910,865, wherein *a mobile station for which a communication link has not been established evaluates transmission from a base station to one or more transceiver units for which communication links have been established, and selects transmission rate.*

The claimed invention of claims 32-34, 72-87, 112-137 has the effective filing date of 08/04/1989 which is the filing date of the parent application 07/389,727, wherein *a mobile station selects transmission rates based on channel quality.*

The claim invention of claims 88-111, 138-150 has the effective filing date of 08/04/1988 which is the filing date of the application No. 07/228,355, which discloses *selecting transmission rates based on channel quality.*

### **Conclusion**

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Qureshi (4,756,007) discloses adaptive communication rate modem:

JP 63004729 A; JP 63026134 A and JP 02274131 A all disclose selecting data rate based on measured channel quality.


15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nguyen T. Vo whose telephone number is (571) 272-7901. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Urban can be reached on (571)272-7899. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Nguyen Vo

  
3-14-2007

**NGUYEN T. VO**  
**PRIMARY EXAMINER**